

REDUNDANT POWER SYSTEMS FOR H3C ENTERPRISE FIXED-CONFIGURATION SWITCHES



H3C RPS 1000-A3



H3C RPS 800-A3



H3C RPS 500-A3

OVERVIEW

H3C® Redundant Power Systems are enterprise-class power redundancy systems that work with many H3C fixed-configuration switches. Redundant power systems (RPS) are an important element for enterprise networks to provide high network availability. RPS power is particularly important for voice-ready networks as an element to providing highest phone uptime.

3Com Corporation manufactures networking equipment under the H3C brand for sale into many markets. These H3C-brand RPS units are compatible with many H3C enterprise fixed-configuration switch Series: S3100, S5500-SI, S3610, S3600, S5100, S5500-EI, S5000, S5600 and S5800.

Redundant power systems provide two functions for compatible fixed-configuration switches:

- › An RPS delivers redundant power to switches so there is continued operation should the main switch unit power supply fail.
- › An RPS provides more power for IEEE 802.3af Power over Ethernet than what the switches alone can provide. For example, a 48-port PoE switch might have a PoE power budget of 360 Watts, which means that approximately ½ the ports can support full IEEE 802.3af PoE power of 15.4 Watts. With an RPS providing additional power, all 48 switch ports can provide full 15.4 Watts of PoE power.

MODELS

Three models of RPS are offered to support 3Com and H3C fixed-configuration switches. Specific RPS units are matched to specific switches based on the switches' power specifications.

RPS 1000 PoE/non-PoE redundancy with operation at -54V supporting multiple switches.

This 1U high unit supports up to two power rectifiers and two power inputs for 1+1 power redundancy, and multiple power output connections to support multiple switch units at the same time. It supports switches with -54V redundant power connections with sufficient power for to fully power all PoE ports of a switch with full power redundancy.

RPS 800 Single-switch non-PoE redundancy with operation at +12V and -54V.

A fixed-configuration 1U high unit with a single power rectifier and a single power connection. Sufficient redundant power for a 48-Port non-PoE stackable switch.

RPS 500 Single-switch non-PoE redundancy with operation at +12V and -54V.

A fixed-configuration 1U high unit with a single power rectifier and a single power connection.

RPS SYSTEMS HIGHLIGHTS

RPS model	Input voltage range	Number of output interfaces	Output voltage/output current	Maximum power output
RPS500-A3	100 VAC to 240 VAC	1	Available outputs: -50 V/7.5 A +12 V/10.5 A	-50 V output only: 375 W +12 V output only: 125 W -50 V and +12 V outputs concurrently: 500 W
RPS800-A	100 VAC to 240 VAC	1	Available outputs: -54 V/12 A +12 V/17.25 A	-50 V output only: 375 W +12 V output only: 125 W -50 V and +12 V outputs concurrently: 500 W
RPS1000-A3	For each power module: 100 VAC to 240 VAC	2	-54 V/25 A	Maximum power output when all eight outputs are working: With two power modules: 2900 W @ 240V AC With one power module: 1450 W @ 240V AC
		6	-54 V/8 A	

H3C SWITCHES WITH RPS SUPPORT

RPS model	Supported switch series / model number		Switch DC input voltage range	DC power cable code
RPS500-A3	S5500-SI series	S5500-28C-SI S5500-52C-SI	Rated voltage range: 10.8 to 13.2 VDC	0404A03C
	S5120 series	S5120-28C-EI S5120-24P-EI S5120-52C-EI S5120-48P-EI	Rated voltage range: 10.5 to 12 VDC	
	S3610 series	S3610-52M, AC powered S3610-52M, DC powered (RPS interface)	Rated voltage range: 10.8 to 13.2 VDC	0404A033
		S3610-28P S3610-28TP S3610-28F S610-52P	Rated voltage range: -48 to -60 VDC	0404A03V
	S3600 series	S3600-28P-EI S3600-52P-EI S3600-28F-EI		
	S5100 series	S5100-26C-EI S5100-50C-EI S5100-24P-EI S5100-48P-EI		
	S5500-EI series	S5500-28F-EI, DC powered	Rated voltage range: 10.8 to 13.2 VDC	0404A08G
		S5500-28C-EI, AC powered S5500-28C-EI, DC powered (RPS interface)		
		S5500-28C-EI, DC powered (-48V interface)	Rated voltage range: -48 to -60 VDC	0404A03U
	S5600 series	S5600-26C S5600-50C S5600-26F		
RPS800-A	S5500-EI series	S5500-52C-EI	Rated voltage range: 10.8 to 13.2 VDC	0404A08G
	S5800 series	S5800-50C S5800-32C S5800-32F	Rated voltage range: -48 to -60 VDC	0404A054

H3C SWITCHES WITH RPS SUPPORT (continued)

RPS model	Supported switch series / model number		Switch DC input voltage range	DC power cable code
RPS1000-A3 8A outputs	S3600 series	S3600-28P-EI S3600-52P-EI S3600-28F-EI	Rated voltage range: -48 to -60 VDC	0404A054
	S3610 series	S3610-28P S3610-28TP S3610-28F S3610-52P		
	S5100 series	S5100-26C-EI S5100-50C-EI S5100-24P-EI S5100-48P-EI		
	S5500-EI series	S5500-28F-EI, DC powered		
RPS1000-A3 25A outputs	S3600 series	S3600-28P-EI S3600-52P-EI S3600-28F-EI	Rated voltage range: -48 to -60 VDC	0404A055
	S3610 series	S3610-28P S3610-28TP S3610-28F S3610-52P		
	S5100 series	S5100-26C-EI S5100-50C-EI S5100-24P-EI S5100-48P-EI		
	S5500-EI series	S5500-28F-EI, DC powered		
	S3100 series	S33100-28TP-PWR-EI	Rated voltage range: -52 to -55 VDC	0404A053
	S3600 series	S3600-28P-PWR-EI S3600-52P-PWR-EI S3600-28F-PWR-SI S3600-52P-PWR-SI		
		S5100-26C-PWR-EI S5100-50C-PWR-EI		
	S5120 series	S5120-28C-PWR-EI S5120-52C-PWR-EI		
	S5500-SI series	S5500-28C-PWR-SI S5500-52C-PWR-SI		
	S5500-EI series	S5500-28C-PWR-EI S5500-52C-PWR-EI		
	S5600 series	S5600-28C-PWR S5600-50C-PWR		
	S5500-EI series	S5500-28C-EI, DC powered (-48 VDC interface)	Rated voltage range: -48 to -60 VDC	0404A053
	S5600 series	S5600-26C S5600-50C S5600-26F		
	S5800 series	S5800-32C-PWR S5800-56C-PWR S5800-60C-PWR		

Note:

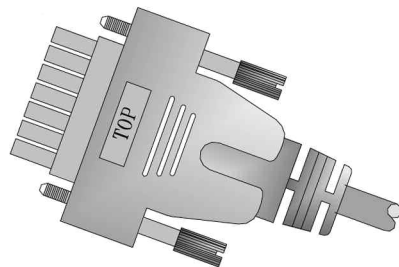
- The RPS500-A3 and RPS 800-A can provide selective DC power supply to the powered device depending on the connected DC output cable(s).
- Currently, when working as an external power supply system for low-end Ethernet switches, RPS500-A3 or RPS800-A does not support concurrent -50 V/ -54 V and +12 V outputs.
- The RPS1000-A3 can feed multiple devices at the same time. The number of powered devices that the RPS unit can support is jointly determined by the power consumption of the powered devices and the maximum output power of the RPS unit. The total power consumption contributed by all the powered devices must not exceed the maximum output power of the RPS1000-A3.
- The output of the RPS500-A3 or RPS800-A is controlled by a control pin. When the powered device's own power supply system becomes fails, a LOW signal is sent to the control pin of the RPS unit. Upon receiving this LOW signal, the RPS unit switches to the DC output state within 2 ms.
- For some models of powered devices, the control pin of the RPS500-A3 or RPS800-A can be controlled through a special cable to support hot backup of power supply. Currently, the low-end Ethernet switches mentioned in this manual do not support this instance.

DC OUTPUT CABLES

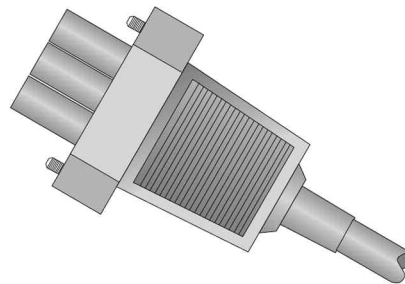
DC OUTPUT CABLES FOR RPS500-A3

Cable type	Code	Output interface type	Length
CAB-RPS-1m-3026C	0404A03C	Direction A: H2*7 (4.20) Direction B: H2*7 (4.20)	1 m (3.28 ft.)
CAB-RPS Pwr-1m-H2X7	0404A033		
CAB-RPS500/800-1m	0404A08G		
CAB-Pwr-1m-PS3FP-I	0404A03V	Direction A: JD5-A Direction B: H2*7 (4.20)	
CAB-Pwr-1m-PS3FP-II	0404A03U	Direction A: JD5 Direction B: H2*7 (4.20)	

Cables coded 0404A03C, 0404A033, and 0404A08G all use H2*7 connectors. Cables coded 0404A03V and 0404A03U use an H2*7 connector for direction B and respectively a JD5-A connector and a JD5 connector for direction A. (The connector of direction A connects to the DC input socket of the switch, and The connector of direction B connects to the DC output interface of the RPS unit.) A JD5-A connector looks like a JD5 except that a JD5 is a little bigger.



H2*7



JD5

DC OUTPUT CABLES FOR RPS800-A

Cable type	Code	Output interface type	Length
CAB-RPS500/800-1m	0404A08G	Direction A: H2*7 (4.20) Direction B: H2*7 (4.20)	1 m (3.28 ft.)

DC OUTPUT CABLES FOR RPS1000-A3

Cable type	Code	Powered device type	Output interface type	Cable length	Maximum output current
CAB-RPS PoE-2m-JD5	0404A053	PoE	Direction A: JD5 Direction B: JD5	2 m (6.56 ft.)	25 A
CAB-RPS Non PoE-2m-JD5-A	0404A054	Non-PoE	Direction A: JD5-A Direction B: JD5-A	2 m (6.56 ft.)	8A
CAB-RPS Non PoE-2m-JD5	0404A055		Direction A: JD5-A Direction B: JD5	2 m (6.56 ft.)	8A

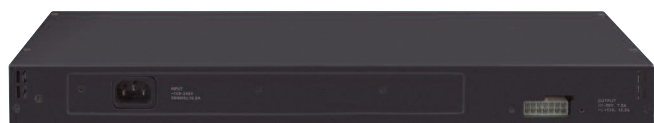
The RPS1000-A3 comes with three types of output cables, which are all default accessories, as listed. For each cable, the connector of direction A connects to the DC input socket of a switch, while the connector of direction B connects to a DC output interface of the RPS unit.

SPECIFICATIONS

RPS500-A3, RPS800-A3, RPS1000-A3

Feature	RPS500-A3	RPS800-A3	RPS1000-A3
Dimensions	44 × 441 × 165 mm (1.73 × 17.36 × 7.17 in.)	44 × 441 × 182 mm (1.73 × 17.36 × 7.17 in.)	44.45 × 440 × 393 mm (1.75 × 17.32 × 15.47 in.)
Weight	< 3.5 kg (<7.72 lb.)	< 3.8 kg (<8.38 lb.)	< 8 kg (< 17.64 lb.)
Input	100 to 240 VAC, 50/60 Hz	100 to 240 VAC, 50/60 Hz	2 AC inputs: 100 to 240 VAC, 47 to 63 Hz 2 slots for Flatpack 1500 power modules
Available Outputs	-50 V/7.5 A +12 V/10.5 A	-54 V/12 A +12 V/17.25 A	2 DC outputs: -54 V/ 25 A 6 DC outputs: -54 V/8 A
Maximum Power Consumption	125 W (+12 V output only)	210 W (+12 V output only)	With one power module: 1450 W
	375 W (-50 V output only)	650 W (-50 V output only)	With two power modules: 2900 W
	125 W for +12 V output 375 W for -50 V output (+12 V and -50V outputs simultaneously) Total: < 500 W	210 W for +12 V output 440 W for -54 V output (+12 V and -50V outputs simultaneously) Total: < 650 W	
Failover time	<10ms		
Operating temperature	0°C to 45°C (32°F to 113°F)		-5°C to +45°C (+23°F to +113°F)
Operating relative humidity	10% to 90% (non-condensing)		5% to 90% (non-condensing)

REAR VIEWS



H3C RPS 500-A3



H3C RPS 800-A3



H3C RPS 1000-A3

SERVICE AND SUPPORT

H3C Global Services offers the resources and talents of a major corporation plus more than 30 years of experience in resolving network challenges and delivering business benefits to enterprises around the world.

Global support with a personalized, local focus in the local language helps drive productivity and minimize expenses. Because H3C understands both the technology and the business, we're the partner you need to remain strong and competitive.

PRODUCT WARRANTY

The H3C RPS has a 1-year Limited Hardware Warranty; return to factory, 90 days of telephone technical support.

ORDERING INFORMATION

SKU No.	Product Name
0213A01S	H3C RPS 1000-A3 Redundant Power System <i>RPS 1000 Redundant Power System Unit, 2 rectifier slots, with 1 Power Rectifier Unit and 5 connector cables: 1x Cable A with JD5 connector [0404A053], 3x Cable with JD5-A connector [0404A054], and 1x Cable B with JD5 connector [0404A055]. Max. output 600W at 110VAC or 1450W at 220VAC.</i>
0213A01G	H3C Flatpack1500-M <i>RPS 1000 Power Rectifier Unit and 5 connector cables: 1x Cable A with JD5 connector [0404A053], 3 cables with JD5-A connector [0404A054], and 1x Cable B with JD5 connector [0404A055]. When installed with a second Power Rectifier Unit, together they support a max. output of 1200W at 110VAC or 2900W at 220VAC.</i>
0213A02R	H3C RPS 800-A Redundant Power System, <i>Max. output 650W</i>
0213A01T	H3C RPS 500-A3 Redundant Power System <i>Max. output 500W</i>
CABLES	
0404A053	H3C RPS 1000 JD5 Cable A <i>JD5 connector</i>
0404A054	H3C RPS 1000 JD5A Cable <i>JD5-A connector [for non-PoE switches]</i>
0404A055	H3C RPS 1000 JD5 Cable B <i>JD5 connector [for non-PoE switches]</i>
0404A03U	H3C RPS 500 Cable U <i>1m length</i>
0404A03C	H3C RPS 500 Cable C <i>1m length</i>
0404A08G	H3C RPS 500/800 Cable G <i>1m length</i>
0404A03V	H3C RPS 500 Cable V <i>1m length</i>

Visit www.H3Cnetworks.com for more information about H3C enterprise solutions.